

ENTOMOLOGY.—*A new genus and species of trombiculid mite (Acarina).*<sup>1</sup> ROBERT TRAUB, Major, MSC, and THOMAS M. EVANS, Army Medical Department Research and Graduate School, Washington, D. C. (Communicated by ALAN STONE.)

Among the trombiculid mites collected by the United States of America Typhus Commission in Assam and Burma in 1944-45 is a remarkable new genus of the subfamily Trombiculinae Ewing, collected from a bird.

*Mackiena*, n. gen.

Agrees with *Riedlinia* Oudemans 1914 in that middle claw is represented by a swollen empodium—the only trombiculid mites in which this condition is known to occur. Separated from *Riedlinia* in that the empodium is pulvilliform, not lanceolate or spatulate; in that the eyes are well developed, not absent; in that the dorsum and venter are covered with a series of fine, definite, concentric circular striations resembling whorls of fingerprints; the palpal claw is trifurcate, not bifurcate; segment II of palpus lacks a lateral tubercle and is devoid of setae (*Riedlinia* bears both a lateral tubercle and a seta); the palpal genu bears a frayed seta, not a nude one; the galea seta is plumed, not nude.

Agrees with *Euschöngastia* Ewing 1938, in that the scutum or dorsal plate bears a single anteromedian bristle, a pair of posterolateral bristles, a pair of anterolateral bristles, and the sensillae are clavate-globose; the chelicerae nonserrate, with a single subapical notch.

With an indication of a crest immediately anterior to the bases of the pseudostigmatic organs. Anterior portion of dorsal plate finely punctate; caudal portion distinctly whorled, with concentric striations. Coxae unisetose. With four ventral setae between coxae III.

Genotype: *Mackiena empodiformia*, n. sp.; no other species known.

*Mackiena empodiformia*, n. sp.

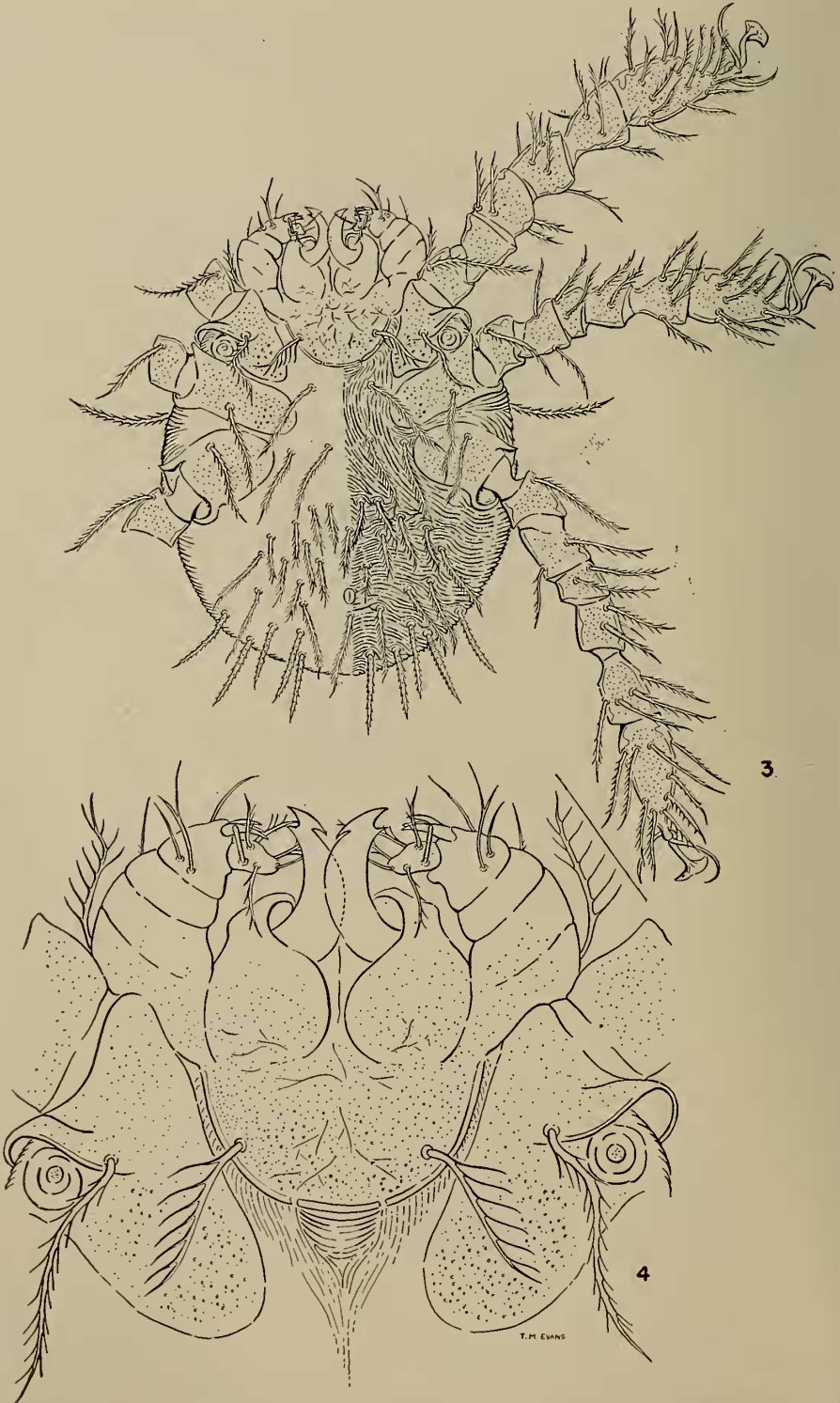
*Larval description* (Figs. 1-4).—BODY: Outline ovate-subcircular, slightly angulate laterally between coxae II and III; dorsum and venter covered with well developed, concentric circular striations in the form of whorls like fingerprints

or contour lines on a map; length 0.23 mm, width 0.185 mm. DORSAL PLATE: Anterior margin slightly sinuate, with one median and two lateral lobes; lateral margins evenly rounded, convex; ratio of length to width: 9 to 13; punctate over most of surface, especially anterior portion, but punctations extending into whorled area; whorls extending cephalad to bases of sensillae (pseudostigmatic organs); with a darkened sinuate ridge extending anterior to and mesad of bases of sensillae, the sinus deepest mesad of bases. Sensillae clavate-globose, petiole extremely short; tomentose; distal fourth of pseudostigmatic organ extending beyond posterior margin of dorsal plate. Bases of pseudostigmatic organs inserted on all ine minutely cephalad of bases of posterolateral setae. Anterolateral setae long and narrow; slightly more than twice the length of dorsal plate; plumose but with short cilia. Anteromedian bristle same diameter as anterolateral, but only slightly longer than dorsal plate; inserted in line with anterolaterals; plumose but with short cilia. Posterolateral setae inserted at level of midline of dorsal plate; similar to anterolaterals but only three-fourths the length. EYES: Well developed; contiguous to dorsal plate laterad of bases of dorsolateral setae; cephalic eye with slightly greater diameter than caudal eye; combined length 24.5 $\mu$ ; width of cephalic eye 12 $\mu$ . CHELICERAE: Acuminate, about 5 times as long as wide near base; with a single subapical notch on each side. PALPAL CLAW: Trifurcate, lateral prongs about three-fourths length of middle prong. PALPAL TARSUS: Almost twice as long as broad at base; with two dorsal branched setae, an apical smooth seta, two ventral plumed setae and a proximal ventral short spurlike process. PALPUS: With a proximal dorsal plumed seta on palpal trochanter and femur; with a dorsal, sparsely frayed seta on genu; 1 fine seta on dorsal surface and 1 frayed and 1 entire smaller bristle on ventral surface of tibia. GALEA: With a pair of plumed proximal ventral setae. DORSAL SETAE: Similar to dorsolaterals, about 30 in number, with rows arranged 2-6-4-6(?). COXAE: Unisetose, setae plumose; coxa I with a dorsal thumblike extension at caudolateral angle, dorsad to well-developed stigma. STERNAL SETAE: A pair of plumose setae between bases of coxae I and

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FIGS. 1, 2.—*Mackiena empodiformia*, n. gen. and sp.: 1, Dorsal aspect of larva; 2, details of anterior region.



FIGS. 3, 4.—*Mackiena empodiformia*, n. gen. and sp.: 3, Ventral aspect; 4, details of anterior region.



II, and two similar pair between coxae III. VENTRAL SETAE: About 36 thin frayed setae in horse-shoe shaped rows of 10-8-8(?), the sinus of each row facing caudad; the more posterior setae somewhat longer and stouter than more anterior. LEGS: I—0.26 mm; II—0.25 mm; III—0.27 mm. Sensory setae as follows: I—1 spur, 2 genualae, 1 microtibiala, 1 subterminala, 1 microspur, 1 microgenuala, 2 tibialae. II—1 spur, 1 genuala, 2 tibialae. III—1 genuala and 1 tibiala. TARSAL CLAWS: Outer claws elongate, acuminate, curved, resembling the blade of a scythe; proximal portion of empodium subequal to diameter of claw, expanded portion of empodium about 4-5 times diameter of claw.

*Type material*.—Holotype (U. S. A. Typhus Commission no. 718-1) deposited in U. S. National Museum. One paratype in collection of British Museum of Natural History.

*Records*.—Holotype and paratype from a weaver-finch (*Ploceus manyar peguensis* Stuart Baker); 20 miles northwest of Myitkyina, on Mogaung Road, February 23, 1945, collected by United States of America Typhus Commission.

*Remarks*.—The genus is named for Col. T. T. Mackie, M.C., who was in command of the India-Burma Field Party of the United States of America Typhus Commission. Capt. Roy T. Melvin of that organization first recognized the generic status. I am deeply indebted to Dr. H. S. Fuller, of the Harvard School of Public Health, who examined *Riedlinia coeca* in the Oudemans collection and who kindly allowed me to use his notes concerning this species. Dr. G. W. Whar-ton, of the Department of Zoology, Duke University, was instrumental in transmitting Dr. Fuller's notes to me.

STANDARD MEASUREMENTS

Slide No.	AW	PW	SB	ASB	PSB	A-P	AM	AL	PL	SENS	DS
718-1 (holotype).....	56	76	37	21	21	19	46	84	66	30	56
718-2 (paratype).....	57	78	38	—	—	—	42	84	67	—	63
Mean.....	56	77	38	21	21	19	44	84	67	30	60

ZOOLOGY.—A new copepod, *Pseudanthessius latus* (*Cyclopoida: Lichomolgidae*),<sup>1</sup> commensal with a marine flatworm.<sup>1</sup> PAUL L. ILLG, U. S. National Museum (Communicated by FENNER A. CHACE, Jr.)

For some years there has been on record the existence of a copepod ectocommensal of very large marine flatworms found on the Pacific coast of the United States. Identified by Wilson, 1935, as *Pseudanthessius obscurus* Scott, several specimens have been preserved in the National Museum. Since that date additional specimens have been added to the collection by the original collectors, Mr. and Mrs. G. E. MacGinitie. Other specimens have been seen and collected from Puget Sound by the author and by Dr. Frank A. Pitelka. Detailed study of the specimens available demonstrates them to represent a new species, well differentiated from the remaining members of the genus. Nicholls, 1944, provided a key to the species known

to that date and pointed out the necessity for exclusion of some incorrectly assigned species. Since this treatment there has appeared the descriptions of 2 new species, *P. gracilioides* Seymour Sewell, 1949, and *P. spinifer* Lindberg, 1946. Accordingly, Nicholls's key, with modification to provide for the 3 subsequently found species, is presented below as a concise differentiation of the various forms.

#### Family LICHOMOLGIDAE Claus, 1889

*Pseudanthessius* Claus, 1889; Nicholls, 1944

The genus is very close to *Lichomolpus*. The salient differentiating character is the reduced fifth foot, consisting of only a spine and two setae, originating directly from the body proper, all other vestige of the appendage as free outgrowth having been completely suppressed.

<sup>1</sup> Published by permission of the Secretary of the Smithsonian Institution. Received December 2, 1949.